FIGURES

Figure 1. Amino acid sequence of human ATF6-α; SEQ ID NO: 4.

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        10          20          30          40          50          60
        |           |           |           |           |           |
MGEPAGVAGT MESPFSPGLF HRLDEDWDSA LFAELGYFTD TDELQLEAAN ETYENNFDNL

        70          80          90          100         110         120
        |           |           |           |           |           |
DFDLDLLPWE SDIWDINNQI CTVKDIKAEP QPLSPASSSY SVSSPRSVDS YSSTQHVPEE

        130         140         150         160         170         180
        |           |           |           |           |           |
LDLSSSSQMS PLSLYGENSN SLSSPEPLKE DKPVTGSRNK TENGLTPKKK IQVNSKPSIQ

        190         200         210         220         230         240
        |           |           |           |           |           |
PKPLLLPAAP KTQTNSSVPA KTIIIQTVPT LMPLAKQQPI ISLQPAPTKG QTVLLSQPTV

        250         260         270         280         290         300
        |           |           |           |           |           |
VQLQAPGVLP SAQPVLAVAG GVTQLPNHVV NVVPAPSANS PVNGKLSVTK PVLQSTMRNV

        310         320         330         340         350         360
        |           |           |           |           |           |
GSDIAVLRRQ QRMIKNRESA CQSRKKKKEY MLGLEARLKA ALSENEQLKK ENGTLKRQLD

        370         380         390         400         410         420
        |           |           |           |           |           |
EVVSENQRLK VPSPKRRVVC VMIVLAFIIL NYGPMSMLEQ DSRRMNPSVG PANQRRHLLG

        430         440         450         460         470         480
        |           |           |           |           |           |
FSAKEAQDTS DGIIQKNSYR YDHSVSNDKA LMVLTEEPLL YIPPPPCQPL INTTESLRLN

        490         500         510         520         530         540
        |           |           |           |           |           |
HELRGWVHRH EVERTKSRRM TNNQQKTRIL QGVVEQGSNS QLMAVQYTET TSSISRNSGS

        550         560         570         580         590         600
        |           |           |           |           |           |
ELQVYYASPR SYQDFFEAIR RRGDTFYVVS FRRDHLLLPA TTHNKTTRPK MSIVLPAINI

        610         620         630         640         650         660
        |           |           |           |           |           |
NENVINGQDY EVMMQIDCQV MDTRILHIKS SSVPPYLRDQ QRNQTNTFFG SPPAATEATH

        670
        |
VVSTIPESLQ
```

Figure 1 (cont.)

Human ATF6-α has a length of 670 amino acids, with a molecular weight of 74,566 Da. Residues 1-150 are involved in transcription activation. Residues 308-328 comprise the basic domain that binds to DNA. Residues 334-369 comprise the leucine zipper. Residues 419-420 comprise the site cleaved by S1P. Residues 378-398 are involved in cleavage by S2P.

Figure 2. Amino acid sequence of human ATF6-ß; SEQ ID NO: 5.

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        10         20         30         40         50         60
MAELMLLSEI ADPTRFFTDN LLSPEDWGLQ NSTLYSGLDE VAEEQTQLFR CPEQDVPFDG

        70         80         90        100        110        120
SSLDVGMDVS PSEPPWELLP IFPDLQVKSE PSSPCSSSSL SSESSRLSTE PSSEALGVGE

       130        140        150        160        170        180
VLHVKTESLA PPLCLLGDDP TSSFETVQIN VIPTSDDSSD VQTKIEPVSP CSSVNSEASL

       190        200        210        220        230        240
LSADSSSQAF IGEEVLEVKT ESLSPSGCLL WDVPAPSLGA VQISMGPSLD GSSGKALPTR

       250        260        270        280        290        300
KPPLQPKPVV LTTVPMPSRA VPPSTTVLLQ SLVQPPPVSP VVLIQGAIRV QPEGPAPSLP

       310        320        330        340        350        360
RPERKSIVPA PMPGNSCPPE VDAKLLKRQQ RMIKNRESAC QSRRKKKEYL QGLEARLQAV

       370        380        390        400        410        420
LADNQQLRRE NAALRRRLEA LLAENSELKL GSGNRKVVCI MVFLLFIAFN FGPVSISEPP

       430        440        450        460        470        480
SAPISPRMNK GEPQPRRHLL GFSEQEPVQG VEPLQGSSQG PKEPQPSPTD QPSFSNLTAF

       490        500        510        520        530        540
PGGAKELLLR DLDQLFLSSD CRHFNRTESL RLADELSGWV QRHQRGRRKI PQRAQERQKS

       550        560        570        580        590        600
QPRKKSPPVK AVPIQPPGPP ERDSVGQLQL YRHPDRSQPA FLDAIDRRED TFYVVSFRRD

       610        620        630        640        650        660
HLLLPAISHN KTSRPKMSLV MPAMAPNETL SGRGAPGDYE EMMQIECEVM DTRVIHIKTS

       670        680        690        700
TVPPSLRKQP SPTPGNATGG PLPVSAASQA HQASHQPLYL NHP
```

Figure 2 (cont.)

Human ATF6-ß has a length of 703 amino acids, with a molecular weight of 76,709 Da. Residues 1-86 are involved in transcription activation. Residues 327-347 comprise the basic domain that binds to DNA. Residues 367-388 comprise the leucine zipper. Residues 440-441 comprise the site cleaved by S1P. Residues 410 and 413, independently, are important for cleavage by S2P.

Figure 3. Amino acid sequence of murine ATF6-α (Fragment); SEQ ID NO: 6.

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        10          20          30          40          50          60
LTHPSCEGEV SVSGKPACVA GAMESPFSPV LPHGPDEDWE STLFAELGYF TDTDDVHFDA

        70          80          90          100         110         120
AHEAYENNFD HLNFDLDLMP WESDLWSPGS HFCSDMKAEP QPLSPASSSC SISSPRSTDS

        130         140         150         160         170         180
CSSTQHVPEE LDLLSSSQSP LSLYGDSCNS PSSVEPLKEE KPVTGPGNKT EHGLTPKKKI

        190         200         210         220         230         240
QMSSKPSVQP KPLLLPAAPK TQTNASVPAK AIIIQTLPAL MPLAKQQSII SIQPAPTKGQ

        250         260         270         280         290         300
TVLLSQPTVV QLQSPAVLSS AQPVLAVTGG AAQLPNHVVN VLPAPVVSSP VNGKLSVTKP

        310         320         330         340         350         360
VLQSATRSMG SDIAVLRRQQ RMIKNRESAC QSRKKKKEYM LGLEARLKAA LSENEQLKKE

        370         380         390         400         410         420
NGSLKRQLDE VVSENQRLKV PSPKRRAVCV MIVLAFIMLN YGPMSMLEQE SRRVKPSVSP

        430         440         450         460         470         480
ANQRRHLLEF SAKEVKDTSD GDNQKDSYSY DHSVSNDKAL MVPSEEPLLY MPPPPCQPLI

        490         500         510         520         530         540
NTTESLRLNH ELRGWVHRHE VERTKSRRMT NSQQKARILQ GALEQGSNSQ LMAVQYTETT

        550         560         570         580         590         600
SISRNSGSEL QVYYASPGSY QGFFDAIRRR GDTFYVVSFR RDHLLLPATT HNKTTRPKMS

        610         620         630         640         650         660
IVLPAININD NVINGQDYEV MMQIDCQVMD TRILHIKSSS VPPYLRDHQR NQTSTFFGSP

        670
PTTTETTHVV STIPESLQ
```

Figure 4. Amino acid sequence of murine ATF6-ß; SEQ ID NO: 7.

```
         10          20          30          40          50          60
          |           |           |           |           |           |
MAELMLLSEI ADPTRFFTDN LLSPEDWDST LYSGLDEVAE EQAQLFRCVE QDVPFDSSSL

         70          80          90         100         110         120
          |           |           |           |           |           |
DVGMDVSPPE PPWDPLPIFP DLQVKSEPSS PCSSSSLSSE SSHLSTEPPS QVPGVGEVLH

        130         140         150         160         170         180
          |           |           |           |           |           |
VKMESLAPPL CLLGDDPASP FETVQITVGS ASDDLSDIQT KLEPASPSSS VHSEASLLSA

        190         200         210         220         230         240
          |           |           |           |           |           |
DSPSQPFIGE EVLEVKTESP SPPGCLLWDV PASSLGAVQI SMGPSPDSSS GKAPATRKPP

        250         260         270         280         290         300
          |           |           |           |           |           |
LQPKPVVLTT VPVPPRAGPT SAAVLLQPLV QQPAVSPVVL IQGAIRVQPE GPAPAAPRPE

        310         320         330         340         350         360
          |           |           |           |           |           |
RKSIVPAPMP GNSCPPEVDA KLLKRQQRMI KNRESACQSR RKKKEYLQGL EARLQAVLAD

        370         380         390         400         410         420
          |           |           |           |           |           |
NQQLRRENAA LRRRLEALLA ENSGLKLGSG NRKVVCIMVF LLFIAFNFGP VSISEPPPAP

        430         440         450         460         470         480
          |           |           |           |           |           |
MSPRMSREEP RPQRHLLGFS EPGPAHGMEP LREAAQSPGE QQPSSAGRPS FRNLTAFPGG

        490         500         510         520         530         540
          |           |           |           |           |           |
AKELLLRDLD QLFLSSDCRH FNRTESLRLA DELSGWVQRH QRGRRKIPHR AQERQKSQLR

        550         560         570         580         590         600
          |           |           |           |           |           |
KKSPPVKPVP TQPPGPPERD PVGQLQLYRH PGRSQPEFLD AIDRREDTFY VVSFRRDHLL

        610         620         630         640         650         660
          |           |           |           |           |           |
LPAISHNKTS RPKMSLVMPA MAPNETVSGR GPPGDYEEMM QIECEVMDTR VIHIKTSTVP

        670         680         690
          |           |           |
PSLRKQPSPS PGNTTGGPLP GSAASPAHQA SQPLYLNHP
```

Figure 4 (cont.)

Murine ATF6-β has a length of 699 amino acids, with a molecular weight of 76,007 Da. Residues 324-344 represent the basic domain that binds to DNA. Residues 364-385 represent the leucine zipper. Residues 437-438 represent the cleavage site by S1P. Residues 407 and 410, independently, are important for cleavage by S2P.

Figure 5. DNA sequence of human ATF6-α; SEQ ID NO: 8.

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   1 aagatattaa tcacggagtt ccagggaaaa ggaacttgtg aaatggggga gccggctggg
  61 gttgccggca ccatggagtc acctttagc ccgggactct ttcacaggct ggatgaagat
 121 tgggattctg ctctctttgc tgaacttggt tatttcacag acactgatga gctgcaattg
 181 gaagcagcaa atgagacgta tgaaaacaat tttgataatc ttgattttga tttggatttg
 241 ttaccttggg agtcagacat ttgggacatc aacaaccaaa tctgtacagt taaagatatt
 301 aaggcagaac cccagccact ttctccagcc tcctcaagtt attcagtctc atctcctcgg
 361 tcagtggact cttattcttc aactcagcat gttcctgagg agttggattt gtcttctagt
 421 tctcagatgt ctccccttc cttatatggt gaaaactcta atagtctctc ttcaccggag
 481 ccactgaagg aagataagcc tgtcactggt tctaggaaca agactgaaaa tggactgact
 541 ccaaagaaaa aaattcaggt gaattcaaaa ccttcaattc agcccaagcc tttattgctt
 601 ccagcagcac ccaagactca aacaaactcc agtgttccag caaaaaccat cattattcag
 661 acagtaccaa cgcttatgcc attggcaaag cagcaaccaa ttatcagttt acaacctgca
 721 cccactaaag gccagacggt tttgctgtct cagcctactg tggtacaact tcaagcacct
 781 ggagttctgc cctctgctca gccagtcctt gctgttgctg ggggagtcac acagctccct
 841 aatcacgtgg tgaatgtggt accagcccct tcagcgaata gcccagtgaa tggaaaactt
 901 tccgtgacta aacctgtcct acaaagtacc atgagaaatg tcggttcaga tattgctgtg
 961 ctaaggagac agcaacgtat gataaaaaat cgagaatccg cttgtcagtc tcgcaagaag
1021 aagaaagaat atatgctagg gttagaggcg agattaaagg ctgccctctc agaaaacgag
1081 caactgaaga aagaaaatgg aacactgaag cggcagctgg atgaagttgt gtcagagaac
1141 cagaggctta aagtccctag tccaaagcga agagttgtct gtgtgatgat agtattggca
1201 tttataatac tgaactatgg acctatgagc atgttggaac aggattccag gagaatgaac
1261 cctagtgtgg gacctgcaaa tcaaaggagg caccttctag gattttctgc taaagaggca
1321 caggacacat cagatggtat tatccagaaa aacagctaca gatatgatca ttctgtttca
1381 aatgacaaag ccctgatggt gctaactgaa gaaccattgc tttacattcc cccacctcct
1441 tgtcagcccc taattaatac aacagagtct ctcaggttaa atcatgaact tcgaggatgg
1501 gttcatagac atgaagtaga aaggaccaag tctagaagaa tgacaaataa tcaacagaaa
1561 acccgtattc ttcagggtgt tgtggaacag ggctcaaatt ctcagctgat ggctgttcaa
1621 tacacagaaa ccactagtag tatcagcagg aactcaggga gtgagctaca agtgtattat
1681 gcttcaccca gaagttatca agacttttt gaagccatcc gcagaagggg agacacattt
1741 tatgttgtgt catttcgaag ggatcacctg ctgttaccag ctaccaccca taacaagacc
1801 acaagaccaa aaatgtcaat tgtgttacca gcaataaaca taaatgagaa tgtgatcaat
1861 gggcaggact acgaagtgat gatgcagatt gactgtcagg tgatggacac caggatcctc
1921 catatcaaaa gttcgtcggt tcctccttac ctccgagatc agcagaggaa tcaaaccaac
1981 accttctttg gctcccctcc cgcagccaca gaggcaaccc acgttgtcag caccatccct
2041 gagtcattac aatagcaccc gcagctatgt ggaaaactga gcgtgggacc cccagactga
2101 agagcaggtg agcaaaatgc tgcttttcct tggtggcagg cagagaactg ttcgtactag
2161 aattcaagga gaaaagaaga agaaataaaa gaagctgctc catttttcat catctaccca
2221 tctatttgga aagcactgga attcagatgc aagagaacaa tgtttcttca gtggcaaatg
2281 tagccctgca tcctccagtg ttacctggtg tagatttttt tttctgtacc tttctaaacc
2341 tctcttccct ctgtgatggt tttgtgttta aacagtcatc ttcttttaaa taatatccac
2401 ctctcctttt tgccatttca cttattgatt cataaagtga attttattta aagctaaaaa
2461 aaaaaaaaaa aaaa
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Figure 6. DNA sequence of human ATF6-ß; SEQ ID NO: 9.

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   1 aaccgtctcc tggttggggg gtgggggga aagatggcgg agctgatgct gctcagcgag
  61 attgctgacc cgacgcgttt cttcaccgac aacctgctta gcccggagga ctggggtctg
 121 cagaacagca ccttgtattc tggcctagat gaagtggccg aggagcagac gcagctcttc
 181 cgttgcccgg agcaggatgt cccgtttgac ggcagctccc tggacgtggg gatggatgtc
 241 agcccctctg agcccccatg ggaactcctg ccgatcttcc cagatcttca ggtgaagtct
 301 gagccatctt ccccctgctc ttcctcctcc ctcagctccg agtcatcgcg tctctccaca
 361 gagccatcca gcgaggctct tggggtaggg gaggtgctcc atgtgaagac agagtccttg
 421 gcacccccac tgtgtctcct gggagatgac ccaacatcct catttgaaac cgtccagatc
 481 aatgttatcc ccacctctga tgattcctca gatgtccaga ccaagataga acctgtctct
 541 ccatgttctt ccgtcaactc tgaggcctcc ctgctctcag ccgactcctc cagccaggct
 601 tttataggag aggaggtcct ggaagtgaag acagagtccc tgtccccttc aggatgcctc
 661 ctgtgggatg tcccagcccc ctcacttgga gctgtccaga tcagcatggg cccatccctt
 721 gatggctcct caggcaaagc cctgcccacc cggaagccgc cactgcagcc caaacctgta
 781 gtgctaacca ctgtcccaat gccatccaga gctgtgcctc ccagcaccac agtccttctg
 841 cagtccctcg tccagccacc cccagtgtcc ccagttgtcc tcatccaggg tgctattcga
 901 gtccagcctg aagggccggc tccctctcta ccacggcctg agaggaagag catcgttccc
 961 gctcctatgc ctggaaactc ctgcccgcct gaagtggatg caaagctgct gaagcggcag
1021 cagcgaatga tcaagaaccg ggagtcagcc tgccagtccc ggagaaagaa gaaagagtat
1081 ctgcagggac tggaggctcg gctgcaagca gtactggctg acaaccagca gctccgccga
1141 gagaatgctg ccctccggcg gcggctggag gccctgctgg ctgaaaacag cgagctcaag
1201 ttagggtctg gaaacaggaa ggtggtctgc atcatggtct tccttctctt cattgccttc
1261 aactttggac ctgtcagcat cagtgagcct ccttcagctc ccatctctcc tcggatgaac
1321 aaggggagc ctcaaccccg gagacacttg ctggggttct cagagcaaga gccagttcag
1381 ggagttgaac ctctccaggg gtcctcccag ggccctaagg agccccagcc cagccccaca
1441 gaccagccca gtttcagcaa cctgacagcc ttccctgggg gcgccaagga gctactacta
1501 agagacctag accagctctt cctctcctct gattgccggc acttcaaccg cactgagtcc
1561 ctgaggcttg ctgacgagtt gagtggctgg gtccagcgcc accagagagg ccggaggaag
1621 atccctcaga gggcccagga gagacagaag tctcagccac ggaagaagtc acctccagtt
1681 aaggcagtcc ccatccaacc ccctggaccc ccagaaaggg attctgtggg ccagctgcaa
1741 ctatatcgcc acccagaccg ttcgcagcca gcattcttgg atgcaattga ccgacgggaa
1801 gacacatttt atgttgtctc tttccgaagg gaccacctgc tgctcccagc catcagccac
1861 aacaagacct cccggcccaa gatgtccctg gtgatgcctg ccatggcccc caatgagacc
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2161 ctgacttaga acgggggggag ggggtaccag gtggccaggt gggactgttt caaatttccc
2221 tgatccccag gcttggggca attggtaaag gaaagagcag gtgtgggggt taagcactta
2281 tttgaggtgg gggtgttcac ctctcttctc atccctttc agaatatagg gctcctctca
2341 ttcctgtgaa cccccagtcc tggcttcttt gtttgagggg attgtgtgag gttcagttgt
2401 ggggtgggtg gtgagctgct gcatattttt tattttgttt ctctagtgtt atggcagtgg
2461 aggtgggaat ttagtcccca ggtgggacaa gggaagtttt ttcattttgg agctagttac
2521 tgggagtaag ggagggtggg gtgggggga gttcaggttt atgtgtgtgc atttcttttt
2581 tattattatt aaataaacaa cttggaggga gttgaaaaaa aa
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Figure 7. DNA sequence of murine ATF6-α; SEQ ID NO: 10.

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   1 ccggagggag aggtgtctgt ttcggggaag ccggcttgtg ttgccggcgc catggagtcg
  61 ccttttagtc cggttcttcc tcatggacca gatgaagact gggagtcgac gttgtttgct
 121 gaacttggct atttcacaga cactgatgat gtgcactttg atgcagcaca tgaggcttat
 181 gaaaataatt ttgatcatct taattttgat ttggatttga tgccttggga gtcagaccta
 241 tggagccccg gcagccactt ctgctcagac atgaaggcag agccccagcc tctttctccg
 301 gcttcctcca gttgctccat ctcctctcct cggtccacag actcgtgttc ttcaactcag
 361 cacgttcctg aggagttgga tttgttgtct agttctcagt ccccccttc cttatatggc
 421 gacagctgta atagcccctc ctctgtagag ccactgaagg aagagaagcc tgtcactggt
 481 cctggaaaca aaacagaaca tggactgact ccaaagaaaa aaattcagat gagtttaaaa
 541 ccttcagttc agcccaagcc tttattactt ccagcagcgc ccaagactca aaccaatgcc
 601 ggtgtcccag caaaagccat catcattcag acactaccag cccttatgcc actggcaaag
 661 cagcagtcga ttatcagcat acagcctgcg cccaccaaag gccagactgt tttgctctct
 721 cagccgactg tggttcaact tcagagccct gcggttctgt cgtctgctca gccggttctt
 781 gcagtcactg ggggagccgc acagctacct aaccatgtgg tgaattgttg ctggccagcc
 841 ccctgtggtg agcagcccgg tgaatggaaa actttccgtg actaaacctg ttctacaaag
 901 tgccaccaga agtatgggtt cggatatcgc tgtgctgagg agacagcagc ggatgataaa
 961 gaaccgagag tctgcttgtc agtcgcgcaa gaagaagaaa gagtatatgc taggactgga
1021 ggccaggcct caaggctgcc ctctcataga atgagcagct gtagaaggag aatggctccc
1081 tgaagcgaca gctggacgag gtggtgtcag agaaccagag gctcaaagtc ccaagtccaa
1141 agcgaagagc tgtctgtgtg atgatagtat tagcatttat aatgctgaac tatgggccca
1201 tgagcatgct ggagcaagaa tcccgaagag tgaaacctag tgtgagccct gccaatcaga
1261 ggaggcatct cttggaattt tcagcaaaag aagttaaaga cacatcagat ggtgacaacc
1321 agaaagacag ttacagctat gatcactctg tgtccaatga caaagcttta atggtgctaa
1381 gtgaagagcc attgctttat atgcctccac ctccatgtca acccctgatt aacacaacag
1441 agtctctcag gttgaaccat gaacttcgag gctgggttca tagacatgaa gtggaaagga
1501 ccaaatctag aagaatgaca aatagccaac agaaagcccg cattctccag ggtgctctgg
1561 aacagggctc taattctcag ctgatggctg tccagtacac agaaaccact agcatcagta
1621 ggaattctgg gagtgagctg caagtgtatt acgcctcccc tggaagttac caaggcttct
1681 ttgacgccat ccgcaggagg ggagatacgt tttacgttgt ctcatttcga agggatcatc
1741 tgctattacc agctaccacc cacaacaaga ccacaagacc aaaaatgtca attgtattac
1801 cagcaataaa cataaatgat aatgtgatca atgggcagga ctatgaagta atgatgcaga
1861 ttgactgtca ggtgatggac accaggatcc tccacatcaa aagctcctcg gttccccctt
1921 atctccggga tcatcagcgg aaccaaacca gcaccttctt tggttcccct ccaacaacca
1981 cagagacgac ccatgtggtc agcaccatcc ctgagtcgtt gcagtagtgc ccgagctgcg
2041 ctggacagca gagactgaag agctggtgaa gatgctgctc tctgcctctt cggcaagcag
2101 agacttgcct tgtacgcaac tccaggggaa gaggaagaga gaacaggaag tgcgctgctt
2161 gtcaccgtcc acccagtggg gtggaacatg ctagcgagca attctctggt ggcagtgcag
2221 ccctgtgggc agtgtcgcct ggtgttggtt ctgctgtgtc atctttagtg cttttctcaa
2281 tgtgtgtttg gttctcagtt atcttccttc aggtcagacc cacttcctct tctgtccact
2341 gcacttcctg gtgcagtaaa gagatttgta tttaaagctt tagaacacat gctcatgtgg
2401 tttccaccaa ttggctttct ctctcctttg gttcaaatcc attctgaatg ttatacttga
2461 gaaaacacat ttcaaaaaac cgagcagcca aaaacatccc acaaagagtc aaaacagttt
2521 agagtttggg taaagggatt atctccagtt ggtaagagtt tatttttact tgtgatttgt
2581 ggttcagccc tggacaaata actgttgtgg gggtcacaga gtgagccaca cactggagac
2641 aagggaaggg aaggccagtg gtggaatgta aggggaagtg actccatttt catatgtatt
2701 taaacacaga gttcctgtgg cctcggtaag ctcagagcta tagccaccct cagtgttgga
2761 actcggctaa tcagcagaga tcttcaaaga tctcagggca catgcttgcc tctcattgtg
2821 gaccctcagc ccagagcata ctcctgtgaa accagactca gcaaagggac ttggaggtca
2881 ctaggcttaa gcaagactag agagtttccc ttaaggacca acagtgcaca gagcaagcat
2941 ggcttcccag agaagctgca gcacagtatg gtgaagttct cagtttttcc agtggaaaga
3001 tgataaagga attaagctct ctttgttgtt gctatggctg tgaacatggc tttaatccta
3061 gcaccatttg gaaggaaagg caggctttgt ttgatatcag cctggcctac atttcaaatt
3121 ccaggacagg acagctaaag ctatataaag aacccacctc aaaaaataga tgaatgaata
3181 aatgagtaaa taaacaaata caaacaaaaa gcaaagttat gttcacatat attttattgt
3241 attttgcctg cttccttcac catagcaagc agccacattt ctattgcact gtacattgta
3301 cgttacaagt tcacagaaat ggatgccagg actcatgtca gtcatgtgct gcctcccttc
3361 ccaggatttc agcaggttct catagactct tcccagcctg gcttgcccat tgtcaggtgg
```

Figure 7. (cont.)

```
3421 tcccattcca gtaagcacaa tggcggctaa gtcctcttct ctctacaagg agtgacacac
3481 agtcaggtca tcttttgcct gtggccccat tatgcctggc actgttcacc aacaactgtt
3541 ccctggacag cactgctgcc atctaagcta aggtgagatg ttttcggggc agggccattc
3601 ttgctgaatt cagtgccgca gtccatcctg attggctctc gggtgatttt cagacaagac
3661 ctgtttgtcc cgggggctgg tcctctaatg ggtgccaagg agaagatacc aaatacatgg
3721 agtaccttta ggagtagcca tttgtggggg aggttgggct accctgtggc catgttcttc
3781 ctgcctgtga agcagctcaa aacgaggatg tgactgtggg ctgtggacag aggcagcaca
3841 cgcattcctg atgctgatct gctgagacac gaatagaatc tgcagtgact ccagtgtacc
3901 agtgcctcag atcaaagacc tcaatagtgt cacgtttgct aaggctgatg cctctcctac
3961 aggtaacagt ggggatgacc gttggaaggc acagccaaag agcagacaga agttaaggtg
4021 gccacagcac aggtcaggga tccaaggagc tggggaggac tgctcaaaac tagtctggaa
4081 gcttgccttc tctgctcctg ctgaccatca ggtcctgtca ttaccactct caggtccgtc
4141 ttatgagatg aggaatgggg ccctcctcag gggagagttt cagaaatgag ggaaaggcaa
4201 ttatagatag aaagaagtat cctgccattt aaattgctga aagagctaga atccctgggc
4261 tcggtagttt gtatcttaat gtttgtgcgc tagcacaggc ccattggaga ggaaaagctg
4321 ttgtcctggg agcaaagtaa gcagccattc aggtctcatt ttttattttg gtatgcttgc
4381 ccttgggtgt ttatagcccg gaactgtagg agctatgtat gtacataata tatatatttt
4441 ttaattt
```

Figure 8. DNA sequence of murine ATF6-ß; SEQ ID NO: 11.

```
   1 gcggggagcc ggctcatggt ggggggtggg gggaagatgg cggagctgat gctcctcact
  61 gagatcgccg acccgacgcg cttcttcacc gacaacctgc tgagtccgga ggactgggac
 121 agcaccttgt acagtggcct ggatgaagtg gccgaggagc aggcacagtt gttccgttgc
 181 gtggagcagg atgtcccgtt tgacagcagc tctctggatg tggggatgga tgtcagcccc
 241 cctgagcccc cttgggaccc tctacccatc ttcccagatc ttcaggtgaa gtccgagcca
 301 tcctctccct gctcgtcctc ctccctcagc tcagagtcct cacatctttc cacagagccc
 361 cccagccagg tccctggtgt aggcgaggtg ctgcatgtga agatggagtc cctggcaccc
 421 ccactctgcc tgctgggggа tgatccagca tccccctttg aaacggtcca gatcactgtg
 481 ggctctgcct ctgatgatct ttcagatatc cagaccaagc tggaacctgc ctctccgtct
 541 tcttctgtcc actctgaggc ctccttgctg tcagcagact ctcccagtca gccttttata
 601 ggagaggagg ttctggaagt gaagacagag tctccgtccc ctccagggtg cctcctgtgg
 661 gatgtcccag cctcttcgct cggagctgtc cagatcagca tgggtccatc ccctgatagt
 721 tcctcaggga aagctccggc cactcggaag cctccactgc agcccaagcc tgtggtacta
 781 accacagttc cggtgccacc tagagctggg cctaccagcg ctgccgtcct cctgcaaccc
 841 ctggtccagc agcctgcggt gtccccagtg gtcctcatcc aaggtgctat ccgagtccag
 901 cctgaagggc cagctcccgc agctccccgg cctgagagga agagcattgt tccagcccct
 961 atgccgggga actcctgccc gcctgaagtg gatgcaaagc tgttgaagcg gcagcagcgg
1021 atgatcaaga atcgagagtc ggcctgccag tcccgccgca agaagaaaga gtacctgcca
1081 aggcctggag gccccggctg caggctgtgc tggccgacaa ccagcagctg cgcagggaga
1141 acgctgccct ccggcggcgg ctggaggccc tgctggcaga gaacagcggg ctcaagctgg
1201 ggtctgggaa caggaaggtt gtctgcatca tggtcttcct tctcttcatt gccttcaact
1261 tttggcctgt gagcatcagc gagccgcctc cagctcccat gtctcctcgg atgagcaggg
1321 aggaacctcg accccagagg cacctgctgg gcttctcaga accagggcca gctcatggca
1381 tggaacccct tcgggaagcc gcccagagcc ccggggagca gcagcccagc tctgcaggca
1441 ggcccagctt cagaaacctg acggccttcc ccgggggagc caaggaggct gctgctgaga
1501 gacctggacc agctcttcct ctcctcagac tgtcgccatt tcaaccgaac tgagtctctg
1561 aggcttgctg atgagctgag tggctgggtc caacgtcacc agagaggtcg acggaagata
1621 cctcacaggg cccaggagag acagaagtct cagctacgga agaagtctcc tccagtgaaa
1681 cctgtcccca cccaacctcc aggacccccт gaaagggacc ccgtgggcca gctgcagctc
1741 taccgccacc ccggccgctc gcagccggag tttctagacg caattgaccg gagggaggat
1801 accttctatg ttgtctcctt ccgaagggac cacctgctgc tcccagccat cagccaccac
1861 aagacatcca ggcccaagat gtcgctggtg atgccagcca tggcccccaa tgagaccgtg
1921 tcaggccggg gccccccagg ggactatgag gagatgatgc agatcgagtg tgaggtcatg
1981 gacaccaggg tgattcacat caagacctct acggtgcccc cctcgctccg gaagcagccg
2041 tccccatccc cgggcaatac cacaggtggc cccttgccag gctccgcagc tagtcctgcc
2101 catcaggcct cccagcccct ttacctcaat cacccctgac atcctcacct cacagtgact
2161 tagaaccggg ttagggaacc tgatcctggg gctcgggggc aattgtaaag gaagacgggg
2221 tgtgggggtt aagcacttag tgggactagg gtgggtggtt cacctctctt ctcactcttt
2281 ccagaaatat agggctcctc tcattcctgc actcccagtc ctctttcccc gagggtacct
2341 cgtgagggtt tcccccatat cctcttcatt ctctccttta tctgtttggg agtcaaggtg
2401 ggactaggtc gccaggtggg acaagggatg gttgtgggtg gcagaagtca gtttatgtgt
2461 gtgcgtatct ttttttttatt attattaaat aaacaacgtg gaggggtgta aagg
```